AMENDMENTS TO THE CLAIMS

1. – 69 (Cancelled)

70. (New) A method of separating buoyant components from a mixture of engine exhaust gases and fluid, the method comprising:

flowing a first mixture of engine exhaust gases and fluid to a receiving chamber;

directing more buoyant components of the first mixture along a slanted upper surface of the receiving chamber and toward a lift conduit;

flowing exhaust gases of the first mixture through the lift conduit of the receiving chamber and toward a gas containing portion of a separator chamber, thereby propelling buoyant liquid and solid components of the first mixture through the lift conduit;

flowing the buoyant liquid and solid components of the first mixture out of the lift conduit and downward, toward a free surface of a second mixture that resides in a first part of the separator chamber;

separating less buoyant components of the second mixture from more buoyant components of the second mixture; and

moving the less buoyant components of the second mixture from the first part of the separator chamber to a second part of the separator chamber.

71. (New) The method of claim 70, wherein moving the less buoyant components of the second mixture from the first part of the separator chamber to a second part of the separator chamber comprises flowing the less buoyant components of the second mixture under a wall that divides the first part of the separator chamber from the second part of the separator chamber.

72. (New - withdrawn) The method of claim 70, wherein moving the less buoyant components of the second mixture from the first part of the separator chamber to a second part of the separator chamber comprises flowing the less buoyant components of the second mixture through a filter

medium that divides the second part of the separator chamber from the first part of the separator chamber.

73. (New – withdrawn) The method of claim 75, wherein the filter medium lies beneath the free surface.

74. (New – withdrawn) The method of claim 76, wherein the filter medium is supported by a porous support.

75. (New) The method of claim 71, further comprising:

returning a portion of the less buoyant components to the receiving chamber from the second portion of the separator chamber.

76. (New) The method of claim 75, wherein returning comprises flowing the portion of the less buoyant components through a return tube that extends to the free surface of the second mixture.

77. (New) The method of claim 75, further comprising:

removing the fluid from the receiving chamber after exhaust gases and buoyant components have been separated therefrom.

78. (New) The method of claim 77, wherein removing the fluid comprises flowing the fluid through a discharge opening positioned in a lower portion of the receiving chamber.

79. (New) The method of claim 78, further comprising:

passing the fluid through a perforated layer in the receiving chamber prior to flowing the fluid through the discharge opening.

80. (New) The method of claim 70, wherein flowing the first mixture of engine exhaust gases and fluid to the receiving chamber comprises imparting a circular motion to the first mixture as the first mixture enters the receiving chamber.

81. (New) The method of claim 70, further comprising:

reducing velocity of the first mixture as the first mixture enters the receiving chamber.

82. (New) The method of claim 70, further comprising:

releasing liquid portions of the more buoyant components of the second mixture from the first part of the separator.

83. (New) The method of claim 82, wherein releasing the liquid portions of the more buoyant components comprises flowing the liquid portions through an opening that lies below the free surface of the second mixture.

84. (New) The method of claim 70, further comprising:

scooping solid portions of the more buoyant components of the second mixture from the first part of the separator.

85. (New) The method of claim 1, further comprising:

providing an internal combustion engine and exhaust system in combination with the separator chamber, the first mixture flowing from the exhaust system and into the receiving chamber.

86. (New) The method of claim 70, wherein the buoyant components include non-fluid components.

87. (New) The method of claim 86, wherein the non-fluid components include soot.

88. (New) The method of claim 1, wherein the buoyant components include fluid components.

89. (New) The method of claim 88, wherein the fluid components include fuel.

90. (New) The method of claim 1, further comprising:

flowing the exhaust gases out of the separator after the exhaust gases pass through the lift conduit.